



# Barometer Report 3



## Preface

Many ports are ill equipped and unable to deal with increases in container traffic. Investment in global port infrastructure has generally lagged demand, leading to congestion and delays at a number of major ports. These delays have the knock on effect of increases in demurrage costs, higher fuel costs incurred to make up delays as well as re-adjusted schedules to account for.

– Port Strategy, 2012

Marine infrastructure is strained as ports struggle to keep up with new developments such as increasing container traffic, increasing vessel sizes and the rapid growth of emerging sectors, such as LNG. Despite the global economic downturn, existing structures need to be brought up to date to avoid a myriad of knock on effects that could potentially harm facilities' reputation and revenue in the future.

Of key concern is the fact that ports are potentially maintaining the status quo, rather than taking the necessary steps now to proactively upgrade infrastructure to accommodate these changes in the market.

The risk associated with leaving it too late to implement changes not only lies in the cost of unscheduled downtime and lost revenue, but damage to relationships with shipping lines and lost confidence within the industry.

Specifiers remain willing to accept the word of suppliers and continue to place too much trust in their reassurances about testing procedures and PIANC "accreditation". It's concerning that procurement decision makers appear to continue to say one thing and do another in terms of verifying the quality and performance of mission critical equipment.

## Scope

This year's edition of the Barometer Report is based on a phase of market research conducted in the last quarter of 2012, surveying a range of stakeholders across the ports, harbours and marine terminal industry. The sample comprises almost 300 respondents and includes port owners, operators, contractors, consultants, engineers and project managers.

The report is broken down in two ways. Firstly, where applicable, there's a benchmark of this year's results against the two previous reports from 2010 and 2011, to examine how the market has changed during this period.

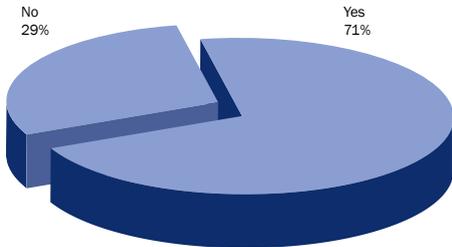
Secondly, we evaluate results from new topics which have been introduced into this year's report.

The results have been segmented into four themes for ease of reference:

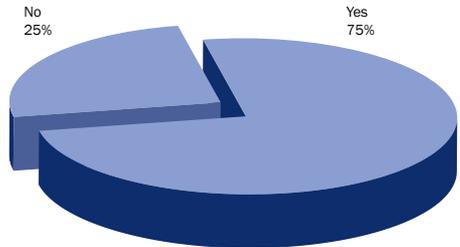
- 1) Investment and Demand
- 2) Monitoring and Automation
- 3) Service and Operation
- 4) Compliance and Regulation

## Investment and Demand

Do you expect CAPITAL expenditure in the marine infrastructure sector (ports, harbours, terminals) to grow in the next 12 months?



Do you expect OPERATIONAL expenditure in the marine infrastructure sector (ports, harbours, terminals) to grow in the next 12 months?



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## Key Findings

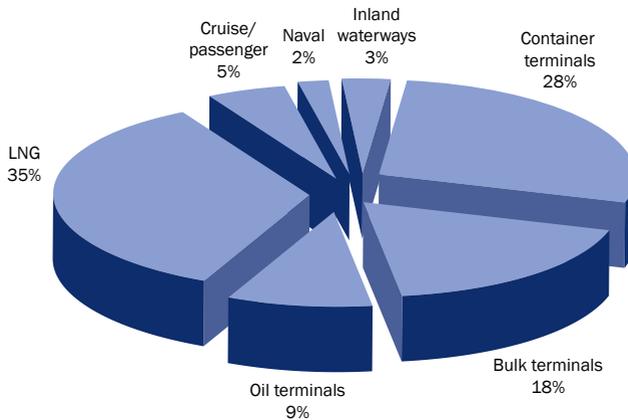
- Over 70% confident that there will be CapEx growth in the next 12 months.
- Over 70% confident that there will be OpEx growth in the next 12 months.

### Trelleborg says:

As per the trend in 2011, the market remains positive about investment over the next 12 months, indicating the potential for more projects, and stimulation of the entire supply chain.

Specifiers should take this opportunity to make investment decisions more wisely and use this increased purchasing power to buy according to quality, low maintenance, safety, and subsequently, whole life costs, rather than chasing short term cost savings.

In the next five years, which marine infrastructure sector will enjoy the biggest increase in demand?



## Key Findings

- Over a third of those surveyed believe that the LNG sector will enjoy the biggest increase in demand.
- Almost 30% think that the Middle East will enjoy the largest export growth of LNG, closely followed by Australia and Russia.
- Over a third believes North Asia (China, Hong Kong, Taiwan) will enjoy the largest import growth in LNG.

## Trelleborg says:

With the LNG sector touted as the next big growth area, throughput will increase and potentially bring about higher levels of unscheduled downtime. The majority of LNG facilities are standalone, and the owners involved in this new breed of terminal will require state-of-the-art infrastructure, as the importance of safety and minimal downtime is paramount.

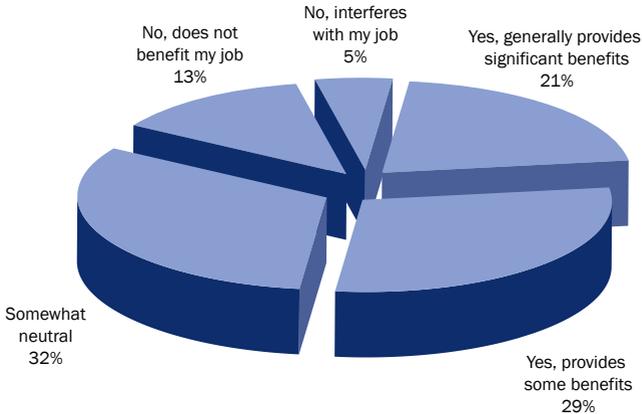
Stringent regulations and safety requirements in this evolved market will mean that facilities looking to capitalise on the opportunities offered will need to ensure high levels of compliance and be prepared to meet the demands of rigorous, ongoing audits and policies.

The changing nature of port construction, materials and the life expectancy of new berths mean it's increasingly important that port owners, contractors and consultants learn from the mistakes of the past, understand current industry trends and explore opportunities offered by modern, state-of-the-art developments.

We expect the FLNG sector to grow rapidly as it becomes increasingly difficult to get approvals to expand in certain territories or countries, but the demand for environmentally friendly energy sources continues to grow.

## Monitoring and Automation

Do you view an increase in monitoring and automation at marine facilities as beneficial to your own job role?



### Key Findings

- 50% of those surveyed believe an increase in monitoring and automation at marine facilities to be beneficial to their job role.
- However, 60% of respondents only use human or manual guidance at their facilities.

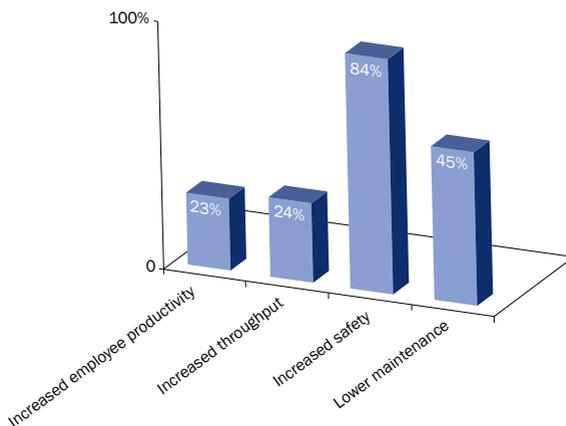
### Trelleborg says:

At first glance, it seems the market is somewhat split on the benefits of technology in monitoring and automation with 50% believing an increase in monitoring and automation would be beneficial to their job role.

However, with 60% still only using human or manual guidance, it appears the market may be maintaining the status quo and putting their facilities at risk of becoming antiquated.

With less than 40% making use of laser Docking Aid Systems (DAS) or Global Positioning Systems (GPS), the market is severely lagging behind the technology available. Whilst monitoring is seen as beneficial, there's still work to be done to bring the technology fully into the port environment. In this increasingly pressurised world, surely these additional tools offer welcome assistance?

What benefits would you expect to receive from specifying a monitoring system (mooring line loads, environmental data, approach speed management, etc) as part of the mooring equipment?



## Key Findings

84% would expect “increased safety” to be the primary benefit in specifying a monitoring system (including solutions such as mooring line loads, environmental data monitoring and approach speed management) as part of the mooring equipment.

## Trelleborg says:

If the overwhelming majority expect an increase in safety by specifying a monitoring system as part of the mooring equipment, it begs the question, why are so many jeopardising their operations by “making do” with out of date equipment?

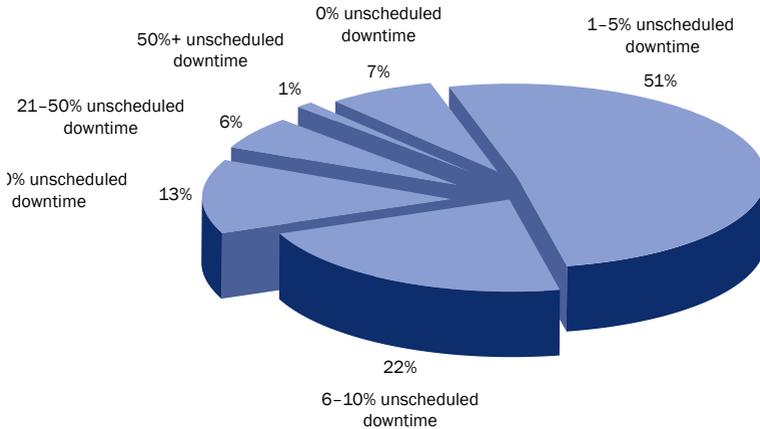
Greater use of automation offers a significant opportunity to upgrade existing port facilities. Automated systems such as mooring line tension monitoring, environmental monitoring and speed of approach monitoring offer facilities that chance to improve both safety and operational efficiency.

## Tweet me!

84% expect increased safety to be primary benefit of specifying a monitoring system  
#Barometer3

## Service and Operation

To what extent has your port facility, or those you work on, suffered from unscheduled downtime in the last 12 months?



### Key Findings

- Over 90% of those surveyed suffer from unscheduled downtime in their facility.
- This is a significant increase compared to last year's results, when just under 80% claimed the same.
- The majority of respondents estimate that unscheduled downtime costs at least £100,000 per year.

ports are underestimating the costs of unscheduled downtime because many fail to quantify indirect costs such as lost business and reputational damage.

### Trelleborg says:

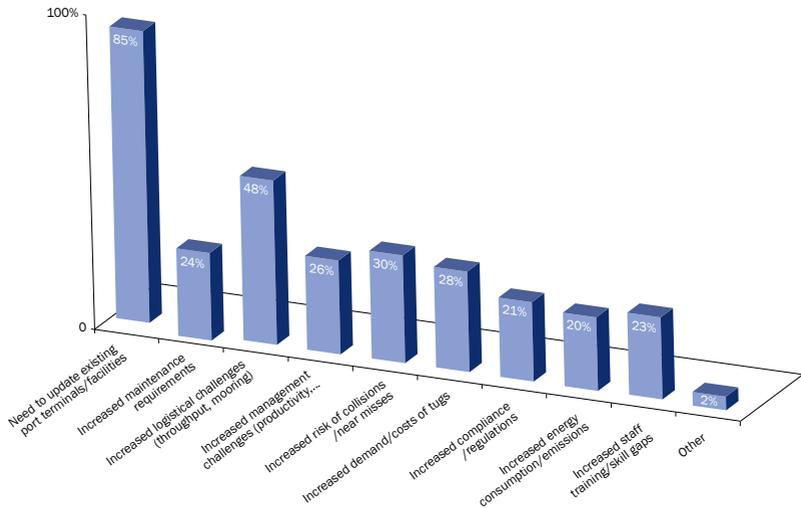
Our 2010 and 2011 reports painted a similar picture on the issue of unscheduled downtime. In 2011, we suggested that the situation may worsen due to inaction on the issue and the increase in traffic flows and vessel sizes that ports are dealing with. This year's results suggest that this may now be happening: far from ports getting to grips with unscheduled downtime, it's actually getting worse.

Unscheduled downtime is costly, not only in terms of lost revenue, but in managing relationships with shipping lines and other stakeholders. In fact, we think that

### Tweet me!

90% of port facilities suffering unscheduled downtime #Barometer3

What do you think are the main challenges brought about by the general increase in vessel sizes?



## Key Findings

Over 70% think it's essential or important that the supplier is fully engaged in the maintenance or periodic audit of jetty based equipment.

85% believe that the main challenge brought about by the increase in vessel sizes is the need to upgrade port infrastructure.

### Trelleborg says:

With such a high number of respondents appreciating the on-going support of the supplier after installation, it's difficult to understand how so many still put their trust in off-the-shelf trading companies that can't offer the same level of service as genuine OEMs.

With the importance placed on after sales service, we think it's possible that "care packages" offering support post-installation will become more of a consideration in the tender process and manufacturers may be required to offer full life assurances as part of the overall package.

There's a worrying trend in the market that continues to grow, in which specifiers are only paying lip service to the importance of quality. Our own experience is that upfront cost is the priority and this accounts for the volume increase in market traders.

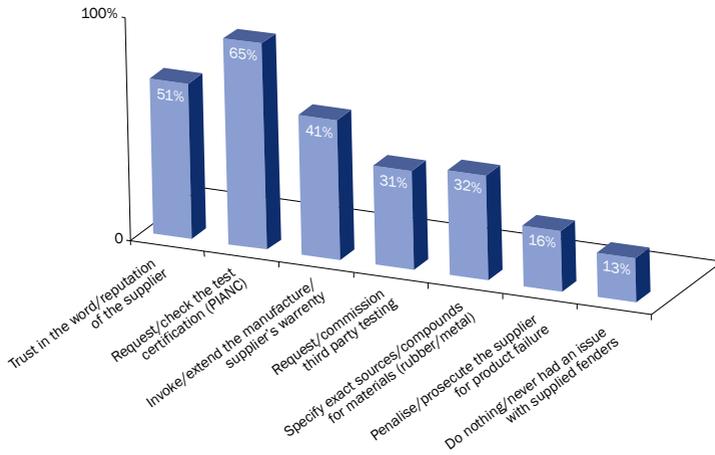
OEMs, on the other hand, can offer customised maintenance and inspection packages, ongoing technical support, ready access to spares and continued operator training.

The majority of respondents believe that increasing vessel sizes mean ports will need to upgrade their infrastructure – it's essential that those doing so put project lifecycle needs before upfront cost savings; otherwise their investment will be at risk from the outset.

At the same time, current installations are already under pressure – as illustrated by the results around unscheduled downtime. Ports will have to act quickly to upgrade infrastructure to avoid the threat of increasingly expensive downtime arising from the perfect storm of increasing vessel sizes and more costly cargo, such as LNG.

## Compliance and Regulation

What steps do you take to ensure that marine fenders supplied to you / your client are supplied as described?



### Key Findings

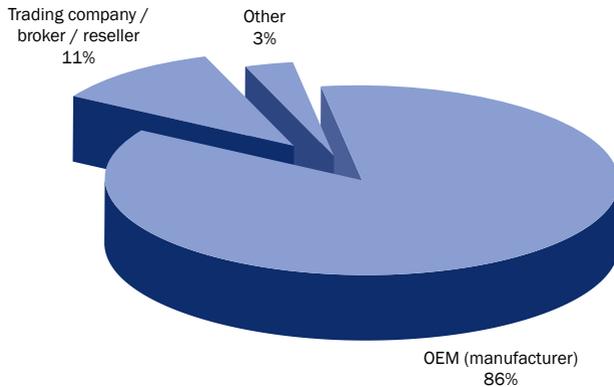
- Over 65% of respondents claim to request and check PIANC certification to ensure that fenders are sold as described.
- A quarter of respondents say they request third party testing on fenders supplied to them.
- Just over 50% would trust the word and reputation of the supplier.

### Trelleborg says:

Specifiers seem to be quite trusting in the reassurances given to them by suppliers of marine fenders. Although a majority claim to request PIANC certification, as detailed in last year's report, some unscrupulous traders often use this as a way to mislead customers and supply products that are not "as described".

It is possible that specifiers are saying one thing and doing another when it comes to procuring quality products? Considering the increase in downtime between 2011 and 2012, it seems that the emphasis placed on procuring from reputable manufacturers in theory is not necessarily translating to best practice.

Which of the following would you trust most to supply good quality, sold as described, marine fenders?



## Key Findings

**I** Nearly 90% would most trust a true manufacturer to supply good quality, sold as described marine fenders, compared to a trading company.

### Trelleborg says:

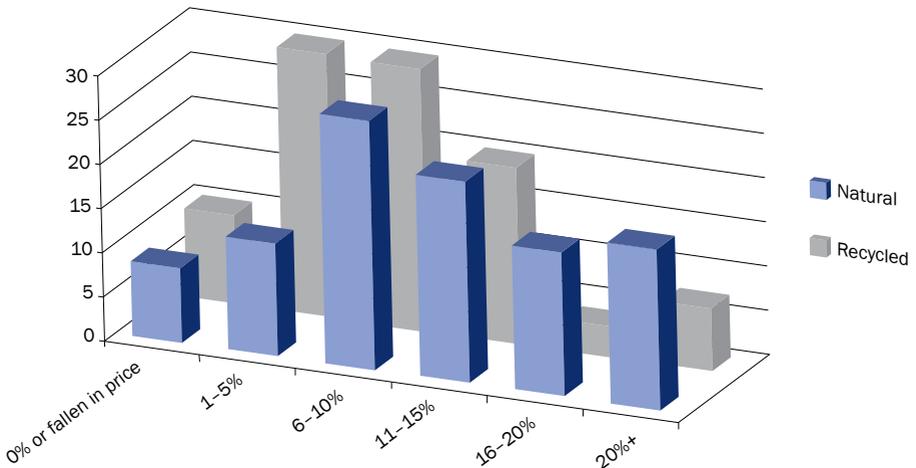
Whilst this overwhelming majority is encouraging, it's essential that specifiers do not get complacent. Whilst many may think they're buying into product from a manufacturer, some traders mislead their customers by misrepresenting their supply chain, facilities or product lines.

It's imperative that specifiers start to take extra steps to ensure that the products being sold to them are truly "as described", otherwise they risk throwing good money after bad when equipment needs to be replaced earlier or maintained more heavily. For example, do you perform the same level of due diligence on procuring good quality rubber as you would for steel or other fender materials?

## Tweet me!

Nearly 90% trust an OEM to supply good quality marine fenders #Barometer3

By how much would you estimate that the price of NATURAL & RECYCLED rubber have increased in the last 12 months?



## Key Findings

The majority of respondents estimated that the price of natural rubber has gone up more than recycled rubber.

### Trelleborg says:

The market is aware that natural rubber prices rise at a faster rate than recycled rubber. The high level of recycled rubber in “low cost” fenders is how many traders manage to undercut competitive prices from reputable fender manufacturers.

What’s less clear is why customers continue to blindly procure low-cost options. If these fenders are really “sold as described” and produced to meet stringent specifications – how do traders manage to keep their prices so steady, rather than increasing in line with the wholesale market?

The lifecycle and performance of marine fenders depends heavily on the compounds and quality/quantity of the different types of rubber used in their production. Independent tests have shown that the performance characteristics of the “low quality” options on the market can vary dramatically from what is often included in the specification; some not even meeting the requirements of PIANC’s Guidelines for the Design of Fender Systems, despite claims to the contrary.

## Conclusion

You may believe in the word of your supplier, or even the PIANC documentation they provide. But, you'd be mistaken for taking those two factors into your due diligence alone.

With mission critical equipment like fenders, where your safety and reputation is on the line, you need to make certain. Make certain that the product is sold as described, that the rubber is up to the job, that your investment is not wasted.

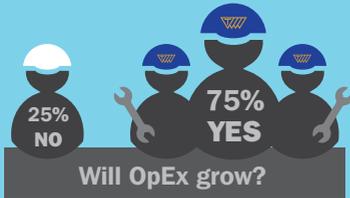
Independent research has proven that so called reputable suppliers are providing low quality fenders filled with dangerous levels of filler material and low quality rubber grades, which add up to insufficient performance characteristics from the fenders.

Is your port or project one of those operating on borrowed time?

Why not make certain by:

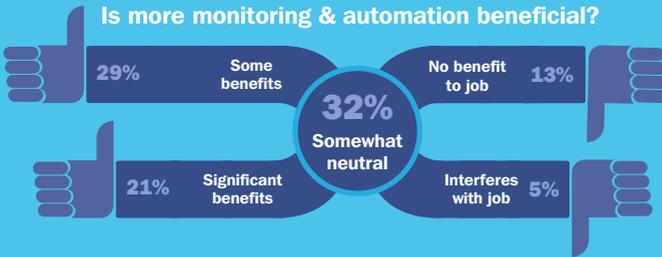
- Requesting third party testing on the equipment you procure?
- Investigating PIANC “accreditation” rigorously – delve into more depth and ensure your supplier isn't misleading you.
- Downloading our whitepaper “Fenders, why it's not so black and white” to understand the effect that compound quality can have on fender performance.
- Taking a holistic approach to infrastructure. Take the time to understand how docking and mooring solutions and increasingly automated products can optimise operations when supplied as part of a full service “solution”, rather than standalone products.
- Looking into ways to update your facility that take into account whole life costs. Short term savings may cost more in the long run, so approach new projects and upgrades with forward-looking, whole life solutions in mind.

## Investment & Demand



## Monitoring and Automation

Is more monitoring & automation beneficial?

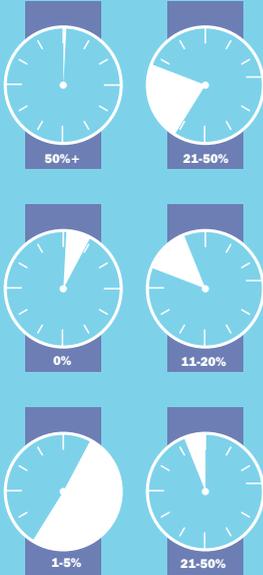


Benefits of specifying a monitoring system...



# Service & Operation

## Unscheduled downtime.



## Increasing vessel sizes will require...

- Update existing port terminals/facilities
- Increased maintenance
- Increased logistical challenges
- Increased management challenges
- Increased risk of collisions/near misses
- Increased demand/costs of tugs
- Increased compliance/regulations
- Increased energy consumption/emissions
- Increased staff training/skill gaps
- Other

# Compliance & Regulation

## To ensure fenders are sold as described...



## Who is most trusted to supply quality fenders?



## How much have rubber prices increased?





Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way.

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